Ysleta ISD Long-Range Technology Plan
Mapping YISD Success: The Technology Plan for 2001 - 2004

Who Will be Involved

The roadmap for YISD technological success is created by a wide *range* of YISD actors.

No one who is interested in the task of mapping the course for YISD initiatives is turned away – the only requirement is interest in and commitment *to* the process of planning.

In the past, the District bas ensured input from all sectors of the YISD community:

- Campus teachers, staff, and administrators
- Instructional Technology staff
- Division of Instruction personnel (mentors, bilingual *staff.* Special Education personnel, Dropout Prevention specialist, etc.)
- Finance Division staff
- Technology Department staff (MIS personnel, networking staff. telecommunication administrators)
- Community members (parents. businesses, partners in education. etc.)

The players involved in the preparation of the YISD Technology Plan for 2001 - 2004 included

- Carol Walters. Interim Superintendent
- Gloria Polanco-McNealy, Chief Academic Officer
- Maria Gutierrez. Director of Instructional Team
- Gerald Whitman. Interim Associate Superintendent for Human Resources
- Maria Greenup. Principal. Ranchland Hills Middle
- Jana Garcia Principal. Indian Ridge Middle
- Carmen Zamora. Principal, Rio Bravo Middle
- Triana Olivas. Principal. Sageland Elementary

Who Will be Involved (continued)

- Sherry Lambert, Director of Instructional Media/Technology
- Irene Morales, Director, Risk Management
- Lucille Housen, Director, Bilingual Education
- Enrique Escobar, Director, Construction and Facilities Management
- Tom Miler, Director, USI Mentors
- Pam Howard, Special Education
- Betsy Geery, Director, Fine Arts
- Bill Richardson. Network Services Manager, Technology
- Richard Duncan, Database Administrator, Technology
- Brenda Montoya Student Systems Manager. MIS
- Gloria Chavez. Finance Systems Manager. MIS
- John McNicol, Network Systems Engineer. Technology
- Oscar Quintela. Help Desk Manager. Technolop
- Sharon Foster. Curriculum Specialist. Instructional Technology
- Skip Holmes. Curriculum Specialist. Instructional Technology
- Isela Walls. Librarian for Central Library
- Patsy Launspach. Technical Services Librarian
- Paul Jewett. Del Valle High School
- Sally Fierro. Scotsdale Elementary
- Marti Allen. Eastwood Heights Elementary
- Kay Waltmon. Desen View Middle
- Lucy Borrego. Tierra del Sol Elementary
- Lorena Olmos. Ysleta Elementary
- Ginna Rhodes. Hanks High School
- Marina Silva Valley View Middle

Ysleta ISD Long-Range Technology Plan
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What We Need to Do

The process in this phase of planning is relatively straightforward.

The purpose of the Technology Pian is to identify the direction for the District for the next several years, and in this planning session the planning committee has taken a look at the plans of the past- the progress that has been made, the position we want to see ourselves in three to five years from now, and the steps that we have to take to get there.

Th planning session has allowed the District to make a careful analysis of the factors that have allowed us to progress, the impediments that have emerged, and what we have to do to continue the progress and mitigate the impediments.

This Technology Plan is the result of that analysis.

Where We Intend to Go

Planning for the future includes definition of instructional objectives, upgrades to the network infrastructure, provision for support of the network and the instructional initiatives, a plan fox sustaining the technology program of the district, and a system to measure our success.

Section 4 of the plan is an overview of the goals and objectives in the technology arena for the next three years.

Sections 5 through 9 identify the specifics of each element of the plan. In summary, the elements that are covered in the plan include:

- ✓ Section 5 -- Instructional Objectives: Technology for Learning

  The section defines what the district sees as the instructional initiatives that either need to be implemented or enhanced to provide YISD students with the most meaningful technology experience possible.

Where We Intend to Go (continued)

- ✓ Section 6 Defining a Networked Environment

  This is a discussion of the current state of the YISD network, and the path(s) of development for the wide area network and the campus LANs from this point through the next three years.

- ✓ Section 7: Supporting the Imtiatives

  Section 7 presents a realistic assessment of what will be necessary to provide meaningful technology resources for the students of YISD.

  This section defines the necessary support structure, both the technical support for the WAN and the campus LANs and the support for the effective integration and use of the technology resources in the curriculum.

  Included in this discussion are the personnel resources required an effective organizational structure for those personnel: and a plan for the acquisition/ replacement of hardware and software at the network and the classroom level.

- ✓ Section 8: Paying Our Way

  Section 8 explains how the district intends to provide those services, including funding from local sources, E-rate discounts. TIFB grants, and other funding sources. Particular attention will be given to alternate plans in the event external funding sources are eliminated or curtailed (in particular, Texas HB 2128 and E-rate).

- ✓ Section 9: The YISD Technology Report Card

  This secrion explains how YISD will evaluate the progress we make to meet the goals and objectives of the plan, and how closely our progress mirrors the plan that we defined. The evaluation will include both internal and external assessments.

When We Will Arrive

In Section 10, the District has defined the roadmap for our technology initiatives of the next three years. This roadmap includes the dates when we think we will implement the various steps that have been defined in the Technology Plan.

We appreciate that circumstances will force adjustments to these time frames, but we also are confident that our experience in planning and in implementing the plans in the past are factors that allow us to make these predictions with confidence.

Should there be adjustments to the time frames defined in this Technology Plan, justification for the adjustments will be made so that the Board of Trustees, the Cabinet officers, and the campuses/departments affected will understand the rationale.

Why It's Important

The formalized planning that the District does for technology is important for several reasons, not the least of which is that it places the YISD in compliance with those funding organizations (e.g., Schools and Libraries Division. E-rate funding) that require up-to-date technology plans as part of the application package. Section 11 describes the features of the Technology Plan that are required for continued participation in the E-rate program.

The most important reasons for the process is to involve the YISD community in the area of technology, to bring the campuses/ depamnents together to discuss the direction and the needs in the area of technology, and to ensure that the direction for technology initiatives is clear and well-thought out.

For those reasons, the planning process is re-visited on a regular basis. and the participants are as inclusive as possible.

Ysleta ISD long-Range Technology Plan
Goals and Objectives

The goals and objectives for the YISD Technology Plan for 2001 - 2004 encompass all the areas that impact the YISD technology initiatives.

The goals and objectives reflect not only the YISD's commitment to providing the most up-to-date and plentiful technology resources possible, but also a commitment to funding levels that will sustain the initiatives and the support requirements to ensure that the best instructional use is made of the technology.

The goals and objectives center on:

- definition of instructional objectives
- enhancement of the YISD telecommunications network
- technical support of the networks and computer resources
- support for curriculum deveiopment and integration of the technology into the curriculum
- a plan for professional development in technology
- funding for technology
- measurement and evaluation of the progress of the Dismct in the technology arena

Well-Defined Instructional Objectives

The YISD Technology Plan has been developed with the over-arching goal of providing a technology environment that conmbutes to the instructional achievement of the YISD students.

Instruction is the most important end result of the YISD technology initiatives.

In order for the Dismct to construct the most effective instructional use of technology, it is critical for the District to define the objectives that the District wants to meet.

The objectives are defined in Section 5, when the instructional goals and objectives are also described.

The objectives are ubiquitous in the sense that all campuses are expected to benefit from the objectives.

The objectives are usable in the sense that they can be implemented by the campuses to fully utili the strengths of the campus instructional leaders and faculty.

Ysleta ISD Long-Range Technology Plan
Goals and Objectives

Well-Defined Instructional Objectives (continued)

The instructional goals that the District has defined call for:

- establishment of clear requirements for the amount of technology on District campuses, and plans io provide access to technology for all students and staff
- increased use of project-based learning
- incorporation of technology TEKS into the curriculum
- establishment of courses to teach the technology application courses (web authoring, programming. networking, etc.)
- continuation of projects to improve library technology resources
- professional development plans to provide staff with technology proficiencies

Enhancement of YISD Telecommunication Infrastructure

The YISD Technology Plan has been developed with the over-arching goal of providing a technology environment that conmbutes to the instructional achievement of the YISD students.

To that end. the infrastructure and capability of the Dismct technology infrastructure *is* increasingly important.

The Technology Plan addresses infrastructure requirements in the following areas:

- Capacity of the YISD connection to the Internet
- Wide Area Network (WAN) capacity and speed (connectionsbetween the central office and the campuses)
- Local Area Network (LAN)capacity and speed
- Flexibility and options of campuses to construct a LAN environment best-suited to the instructional objectives of each individual campus

Support Structure for Technical Support, Curriculum Development and Integration of Technology into the Curriculum

The support issue generally revolves around two distinct areas where support is crucial to the success of the YISD's technology initiatives:

- Support for use and integration of the technology into the curriculum.

  Support for the widest, most effective use of technology. and for integration of technology into the curriculum covers several areas: training in basic computer usage, advanced technology usage, use of specific instructional and administrative software, curriculum development and customizing technology resources for specific purposes in the classroom and instructional web site identification and review.

- Technical support.

  "Technical support" likewise covers a large amount of territory, including support for the networks (both WAN And campus LANs), training and support of the campus technical person(s), support for application packages. and support to keep the workstations operational.

Issues in Establishing Appropriate Levels of Support

In defining the best structure for support of technology integration. the District has sought to combine the most successful current strategies with other promising strategies that will address our support requirements and with successful support strategies from other educational organizations.

Some of the difficulties in establishing the optimum support structure for YISD include issues that confront all educational organizations trying to support technology initiatives.

Ysleta ISD Long-Range Technology Plan
Goals and Objectives

Support Structure for Technical Support, Curriculum Development and Integration of Technology into the Curriculum (continued)

Issues in Establishing Appropriate Levels of Support (cont'd)

Our task is to address the support issues within the constraints that YISD, like the majority of K-12 districts, faces. Some of the those issues are:

- The campus-level support has not been fully defined; as a result, the support person(nel) often are responsible for both technical support. loading and inventorying software, and technology integration
- Unclear definition of the centralized/decentralized responsibilities for both technical support and support of technology integration
- Reluctance of campuses/districts to hire non-teaching faculty
- Unrealistic view on the part of some districts of the staffing demands for all levels of support
- Varying levels of technical proficiency and varying levels of enthusiasm for technology
- Unclear (non-existent)current definition of the best suppon structure for K-12

Goals and Objectives for Support of Increased Use of Technology and Technology Integration

The Technology Plan defines the *terms* and concepts relevant to the issue of technology integration into the curriculum, and provides goals and objectives, and supporting information, in the areas of:

- Centralized definition of standards in the areas of TEKS suppon for the WAN and the campus LANs

Ysleta ISD Long-Range Technology Plan
Goals and Objectives

Support Structure for Technical Support, Curriculum Development and Integration of Technology into the Curriculum (continued)

Goals and Objectives for Support of Increased Use of Technology and Technology Integration (cont'd)

- Development of benchmarks for technology skills for students and staff
- Requirements for addressing technology related areas in the ICAPs (Integrated Campus Action Plans), including standards for the amount of technology that must be provided for student use, requirements for professional development to increase the technology proficiencics of the staff, benchmarks for student and staff skill acquisition. and realistic and supportive means of measuring progress.
- Definition of requirements for campus library systems and options and support for campuses to customize the library technology environment to technical Centralized suppon for the maintenance and repair of computers at the campuses, especially those most heavily used in instructional settings

Goals and Objectives for Technical Support

The Technology Plan also defines the terms and concepts relevant to the issue of technical support.

The Technology Plan provides goals and objectives. and supporting information. in the areas of:

- Centralized support for the WAN and the campus LANs
- Centralized support for the maintenance and repair of computers at the campuses, especially those most heavily used in instructional settings
- Cenualized support and training for administrative applications. including student system and finance system

Ysleta ISD Long-Range Technology Plan
Goals and Objectives

Support Structure for Technical Support, Curriculum Development and Integration of Technology into the Curriculum (continued)

Goals and Objectives for Technical Support (continued)

- Campus responsibility (options) in the maintenance and support of both the LAN and computer resources
- Establishment of goals for numbers of support specialists (per campus and per feeder pattern)

Professional Development Plan

One of the primary vehicles for attainment of required level of technical proficiencies is professional developmen:.

Professional development is addressed in some measure in the campus action plans, but within the YISD professional development has been addressed primarily through a centralized professional developmen: strategy.

Goals and objectives *are* covered in the Technology Plan for professional developmen: in the technology *area.* including:

training in specific areas. and in professio

Measurement and Evaluation

Measurement of success has been a pan of the current Technology Plan: measurement of the district's technological progress and evaluation of the strategies that the district employs to advance technology are an important pan of the new Technology Plan.

Goals and objecrives for measurement and evaluation have been developed in these specific areas:

- ✓ Student achievement in technology areas
- ✓ Student use of digital portfolios

Measurement and Evaluation (continued)

- ✓ Increase in technology proficiencies of YISD staff
- ✓ Success of project *to* upgrade connectivity between the YISD central office and campuses
- ✓ Success of project *to* enhance Internet access (bandwidth *to* the Internet from YISD central office)
- ✓ Success of campus LAN enhancements
- ✓ Decrease in network downtime
- ✓ Level of satisfaction with network access and reliability, telephone system, administrative systems, professional development opportunities

Ysleta ISD Long-Range Technology Plan
Instructional Objectives:
Technology for Learning

Technology for Learning

The YISD objective has always been to place instruction and learning at the highest place of importance in any of the technology endeavors of the district.

In some instances, that has been an implicit presumption. At this juncture, the planning team for the YISD's technology long-range plan makes the unequivocal assertion that the district will undertake technology initiatives to first and foremost promote instruction and leaning.

Adoption of Previous Initiatives

The progress that the District has made in increasing technology in the instructional day has been substantial.

Internet Access

The Internet is available in every campus in the library. in computer labs. and via individual workstations in classrooms.

The lnternet is now a standard research tool. and many campuses have integrated Internet sites and resources into course material and course requirements.

After the completion of the first phase of campus LAN wiring. connections were available to the Internet at each campus. Beginning in 1996-97. campus computer labs and libraries became the priority for connection to the Internet. With each succeeding year, additional campuses were connected to the Internet, primarily with connections in computer labs and libraries.

The growth in Internet access has grown every year at virtually every campus: the connections have extended from labs and libraries to connections in individual classrooms.

Ysleta ISD Long-Range Technology Plan
Instructional Objectives:
Technology for Learning

Adoption of Previous Initiatives (continued)

Internet Access (continued)

Currently, in the Spring 2001, every campus has Internet access for students and staff from a variety of locations: computer lab(s), library, classrooms, and administrator workstations.

Library Resources

The District's library initiatives have been undertaken with the intent to make the campus library the centerpiece for research and information.

To improve the library facilities at every campus, the District has:

- ✓ upgraded and increased campus library equipment:
- ✓ provided for the installation of Time Warner Internet access in the library for research purposes.
- ✓ installed a centralized. district-wide library system to streamline management of the libraries. to facilitate exchange of resources among district libraries. to increase the number of online periodical holdings and indexes. and to provide additional online research capability.
- ✓ joined on a district level the TLC (Texas Library Connection). a consortium of library organizations that includes K-12 districts. public libraries. and other libraries from Texas public organizations.
- ✓ provided online. electronic data bases at all campus libraries, increasing the resources available and providing students with the skills to use these resources (which are commonplace in higher education libraries).
- ✓ joined the EPAL consortium (a consortium of El Paso area libraries).

Ysleta ISD tong-Range Technology Plan
Instructional Objectives:
Technology for Learning

Adoption *of* Previous Initiatives (continued)

TEKS and Technology Applications

The state-mandated TEKS and technology applications have been addressed in detail over the last three years as a priority of the YISD in the area of instructional technology.

The work that has been done during the last three school years (1998-99, 1999-2000, 2000-01) includes:

- ✓ Development of benchmarks and expected proficiencies for students in the TEKS and Technology Applications; the benchmarks were available for general use in June 2000. and were organized according to grade level (i.e., K-2, 3-5, 6-8, and *9-12).*

  As pan of the benchmarks, an Action Plan that included the tasks required for the implementation of the TEKS and Technology Applications courses.

- ✓ Instructional Technology defined a Scope and Sequence for effectively teaching skills such as keyboarding. word processing, computer basics, graphics/multi-media. databases. communication tools, and assessment of progress.

  The Scope and Sequence was developed for use by campuses as a guide in introducing the skills. developing methods to teach the skills. and assess students' progress in this area.

- ✓ Campuses and central office instructional support teams developed requirements that c a m p w s address TEKS and Technology Applications in the ICAPs (Integrated Campus Action Plans).

  The ICAPs must address hardware purchase, maintenance, and upgrades; access and use of telecommunications by all students and staff; professional development strategies; the teaching of TEKS for Technology Applications; and the implementation of technology into all areas of instruction.

Ysleta ISD Long-Range Technology Plan
Instructional Objectives:
Technology for Learning

Adoption of Previous Initiatives (continued)

May 1998 Master Plan of Tactical Activities

As part of the revision of the YISD Long Range Technology Plan in 1998, a Master Plan of tactical activities was created. The activities addressed the goals defined in the 1998 revision of the Plan, and many of the activities addressed instructional objecrives.

The activities developed for the May 1998 Master Plan included specific activities that addressed the instructional goals listed below. Please refer to the May 1998 Master Plan Worksheet of Activities to see the specific activities, the begin and end dates, the resources needed for completion of the activities, the persons accountable an the contributors, and the evaluation criteria.

- Goal: To use technology to increase student performance across the curriculum

  Seven activities were identified for this goal.

- **Goal:** To provide instruction to prepare students with technology work skills ready to compete in a global society.

  Six activities were identified for this goal.

- Goal: To synthesize and communicate relevant knowledge by developing strategies to increase/assess student and educator technology proficiencies.

  Four activities were identified for this goal.

- Goal: To synthesize and communicate relevant knowledge by developing strategies to increase/assess student and educator technology proficiencies.

  Four activities were identified for this goal.

- Goal: To provide access to technology to raise student expectations, choices. and productivity by maximizing learning opportunities.

  Eight activities were identified for this goal.

Ysleta ISD Long-Range Technology Plan
Instructional Objectives:
Technology for Learning

Adoption of Previous Initiatives (continued)

May 1998 Master Plan of Tactical Activities (continued)

- **Goal: To maintain educators'** skill currency and facilitate the *sharing* and distribution of technology knowledge and skills.

  Four activities were identified for this goal.

Instructional Goals and Objectives: 2001-02 throuqh 2003-04

Project-Based Learning

Project-based learning is defined as instruction that centers around an issue or problem. and that requires the students to:

- research a varier). of issues pertaining to the project
- use their internet research skills. their skills with other online library resources. and e-mail communication IO gather information
- use their word processing skills. spreadsheet. and database software to analyze the information. to organize their report/findings. and to prepare and revise their presentation
- to use word processing skills. presentation software. and other appropriate software and electronic resources to distribute their findings

Project-based learning is a type of instruction that is inter-disciplinary and that allows the student to discover different approaches to any specific project or problem. to narrow down the scope of their specific investigation. to identify a thesis and organization pattern for their presentation, and draft and revise their final product.

Ysleta WD Long-Range Technology Plan
Instructional Objectives:
Technology for Learning

Instructional Goals and Objectives:
2001-02 through 2003-04 (continued)

Project-Based Learning

In addition to retaining their position as experts in the field they are teaching, teachers become guides to the students to help them refine their approach, narrow the scope of their response appropriately. and discover alternate paths to the solution of the problem(s).

Teachers also assist the students to identify and incorporate the appropriate technology tools into their projects.

Goal: To incorporate project-based learning as a vehicle for integrating technology into the curriculum, at all grade levels and as part of every instructional area.

Goal: To provide guides for the use of project-based learning at every grade levels (e.g., appropriate projects and activities. time frames. levels of detail. and expectations).

Goal: To conduct professional development that addresses specifically the area of project-based learning and that provides teachers with the skills to incorporate project-based learning into their courses.

Ysleta ISD Long-Range Technology Plan
Instructional Objectives:
Technology for Learning

Instructional Goals and Objectives:
2001-02 through 2003-04 (continued)

TEKS and Technology Applications

As noted previously and in other sections of the Plan, TEKS and Technology Applications have occupied a central place in the list of instructional technology objectives.

Because of their importance to all students in the acquisition of basic computer skills, enhancement of those basic skills, and completion of courses in programming, networking, and web page development the District will continue to include TEKS and Technology Applications as an important segment of our instructional objectives for technology.

Goal: Ensure campuses continue to address the TEKS and Technology Applications as pan of ICAPs. including plans for implementing Technology TEKS.

Goal: Ensure campuses employ the district-level benchmarks as measurement of the progress of students in acquiring basic and advanced technology skills.

Goal: Provide workshops and other training for campuses that help campuses understand and employ the Scope and Sequence as a guide for teaching TEKS and Technology Appliarions.

Instructional Goals and Objectives: 2001-02 through 2003-04 (continued)

Digital Portfolios

Digital portfolios are included as one of the sections of the Technology Applications benchmarks and expectations developed in June 2000 by a YISD team of instructional technology specialists.

Building on that document as a starting point. the goals and objectives for the use of digital portfolios include:

Goal: Develop a specific definition of digital portfolio to include the type of work to be included, the storage format the space requirements and allotments per student, and the responsibility for long-term storage and accessibility of the material.

Goal: Ensure that campuses understand the definition of digital portfolio as it is used as an instructional goal in the YISD.

Goal: Provide campuses with the technical requirements to implement digital portfolios.

Goal: Provide teachers and administrators with training to understand the use and value of digital portfolios. and to help them plan for the most effective implementation of digital portfolios at their campuses.

Ysleta ISD Long-Range Technology Plan
Instructional Objectives:
Technology for Learning

Instructional Goals and Objectives:
2001-02 through 2003-04 (continued)

Standards for Campus Technology

These standards are important to the YISD to set levels for technology in two distinct areas:

- clear requirements for the amount of technology on District campuses, and
- plans for increased use of technology in daily instruction

Goal: To establish clear minimum requirements for technology at YISD campuses, including library resources, classroom computers, computer labs, and teacher access to technology resources.

Goal: Based on campus ICAPs, to ensure that campuses identify annually either new technology initiatives or enhance-ments to existing initiatives. with implementation schedules, schedule of activities. desired outcomes. and a process(es) for evaluation.

Ysleta ISD Long-Range Technology Plan
Instructional Objectives:
Technology for Learning

Instructional Goals and Objectives:
2001-02 through 2003-04 (continued)

Video in the Classroom

In the fall semester of the 2000-01 school year bids were solicited for instructional video applications, including streaming video and video on demand.

Campuses have in the last several years asked for the capability to include video in a variety of ways in the classrooms:

- to have the capability to schedule video segments or entire presentations from previously taped productions, to be shown in conjunction with classroom work
- to w interactive video in the classroom

The goals and objectives are provided for the 2001-02 school year to mirror the purpose of the E-rate contract award. The E-rate award was for pilot projects for both streaming video and video on demand on ten campuses.

Goal: To solicit proposals from campuses for initiatives employing streaming video and video on demand in insuuctional settings.

The pilot projects will be set up at ten campuses. based on type of project. availability of current campus resources to implement and complete the pilot. and suitability for w as a model for other campuses.

Beyond the pilot projects. the District intends to establish goals for the use of video in instructional settings at all grade levels. beginning with an emphasis in the secondary level.

Goal: To provide campuses with ideas for the use of streaming video in instructional settings, to ensure that technical facilities are in place to support the use of streaming video. and to ensure that campus staff are trained in the use of streaming video.

Instructional Goals and Objectives: 2001-02 through 2003-04 (continued)

Video in the Classroom (continued)

Goal: To provide reliable facilities for distribution of video on demand, and to ensure that training is provided in the best use of video on demand.

Distance Learning

Distance education includes a variety of technological applications, including:

- ✓ college courses for credit for high school students
- ✓ high school courses in advanced courses such as calculus. science. language (e.g., French IV. Latin IV. etc.)
- ✓ high school courses that allow middle school students to enroll for credit (e.g., Algebra I. first year language courses. etc.)
- ✓ virtual high school
- ✓ staff development

Goal: To provide for distance leaming applications in a variety formats. including classroom facilities. individual work stations. and small groups of students.

Goal: To provide teachers with opportunities through distance education to attain graduate degrees and/or additional cenification.

Goal: To provide distance learning methodology training for teachers. to increase the number of teachers willing to teach in a distance learning environment.

Ysleta ISD Long-Range Technology Plan
Instructional Objectives:
Technology for Learning

Instructional Goals and Objectives: 2001-02 through 2003-04 (continued)

Distance Learning (continued)

Goal: To develop a distance learning program that formalizes the YISD approach and philosophy on distance education, including technical and non-technical issues (scheduling, teacher training, curriculum development).

Goal: To continue the developmental work for a Virtual High School.

Technology and Individual Learning

The District has at all times ensured that the technology initiatives made positive differences in the educational life of all students. To that end. the instructional goals of the district also include the assistive technology that bring network resources and other instructional technology to special needs children.

Goal: To develop a plan that addresses the technology requirements of special needs children.

Goal: To ensure that the District Home Bound program makes the most effective use of instructional technology for the students (both long-term and short-term) in the program.

Ysleta ISD Long-Range Technology Plan
Defining a Networked Environment

Starting Point for the YISD Network

The YISD Long-Range Technology Plan of 1993 called for the implementation of an integrated telecommunications network.

The network would ultimately provide voice, data, and video services, and it would Serve the instructional and administrative needs of the District.

The district's plan called for a phased approach that ensured cost-effectiveness and provided flexibility to the district to incorporate new technologies in the network infrastructure.

A History of Innovation

The intent from the inception of the YISD network was that it would ultimately provide for all the telecommunication services required by the district.

This abbreviated history of the effort to install the network explains how the network was built in carefully planned segments. and what the upgrade paths are for the district.

The explanation of the implementation history details the work on the data network. and separately the work on the telephone network.

With the implementation of a leased fiber network in 2001-02. already completed upgrades to the campus LANs, a networked telephone system and and planned installation of Voice over IP telephone solution. that convergence is very close to reality.

The creation of the YESnet has centered around essentially three key components: establishing the basic infrastructure and connectivity: enhancing the local area networks' capacity and functions: maximizing the capacity and speed of the wide area network bandwidth.

Ysleta ISD Long-Range Technology Plan
. Defining a Networked Environment

A History of Innovation (continued)

Providing the Basic Infrastructure

The YISD Technology Plan of 1993 called for the creation of a network infrastructure that would initially support the Dismct's administrative systems – is., the student administrative system and the finance system – and provide connectivity for a small number instructional locations selected by each campus (computer labs, libraries, and classrooms).

The intent of the YISD was to begin the installation of a network that would ultimately provide resources for all the instructional and administrative requirements of the district.

The basic connectivity included a high-speed connection between the central office and each of the campuses; an integrated local area nerwork at each campus: and a connection between the central office and a reliable internet service provider.

Phase 1. The wiring and electronics acquisition was begun in the 1994-95 school year for the YISD wide area nerwork (WAN).

In Phase I of the project, the District completed the following portions of the District wide area nerwork:

- ✓ Completing a T-1 connection between central office and every campus.
- ✓ Creating a main communication room at cenual office and at every campus for all telecommunication lines and wide area network electronics (router. hubs. servers).
- ✓ Wiring for campus administrative work areas and selected instructional locations (libraries. labs).

Phase I of the nerwork project was concluded in the Fall semester of *1995.* with the connection of all campuses to the YISD central office. and the beginning of each campus local area network (LAN).

Phase 2. Phase II of the nerwork project began during the spring of *1995-96.* and was completed during the late fall of the *1996-97* school year.

A History of Innovation (continued)

Providing the Basic Infrastructure (continued)

Phase II was a continuation of Phase I, and included the extension of the campus LAN to all instructional areas in the main campus building(s).

The primary emphasis of Phase II was to provide a network connection in every classroom in the main building at the campuses.

- If campuses required additional network drops in the [redacted]ative areas, those drops were installed.
- ✓ If the campuses required Intermediate Distribution Facility(ies), those IDFs were provided (including hubs and high-speed Ethernet switch).

Enhancing the Local Area Networks

Once the basic infrastructure and connectivity was established. the district addressed the upgrade requirements for the campus LANs.

The enhancements that have been provided include:

- ✓ Improved proxy services. Beginning with TIF grants for five of the highs schools in the 1996-97 school year. the District moved to increase the services at the LAN level. The high schools were provided with proxy servers that performed content filtering, dynamic internet addressing and other internet administration tasks. and internet caching.

  Four middle schools received similar TIF grants in the 1997-98 school year, and in the 1998-99 school year the District acquired, with E-rate discounts proxy and e-mail servers for each of the campuses.

- ✓ Upgrading the environment from a 10 Mb shared environment to 100 Mbs switched. This upgrade was

A History of Innovation (continued)

Enhancing the Local Area Networks (continued)

completed in the spring of the 1999-2000 school year for all campuses.

- ✓ **Ongoing Connectivity Initiatives.** Since the completion of the second phase of the basic infrastructure installation, the district has extended the reach and functionality of the campus local area networks.

  Each year, there is a portion of funds set aside for wiring at the campuses. The wiring connects portables, stadiums. field bows, and other buildings away from the main building. Computer labs are wired, and classrooms within the main building are re-wired and provided with upgraded network electronics in some cases.

Upgrading the YISD Wide Area Network (WAN)

The upgrades to the YISD WAN center around *two* areas:

- ✓ the YISD connection *to* the Internet, and
- ✓ the connections between the central office and the campuses

Upgrading the YISD Connection to the Internet. Initially, the YISD connection to the Internet was via a single T-1 line connection from the YISD central office to THEnet in Austin (via UTEP). THEnet, a gateway to the Internet for educational entities, was the YISD connection *to* the Internet.

Since that time. YISD has responded to increased demand for Internet resources by:

- ⇩ adding a second T-1 connection to the Internet via Region 19 and the state General Services Administration (1999-2000 school year)
- ⇩ adding a third Internet connection via a third-party ISP (2000-2001 school year)

A History of Innovation (continued)

Upgrading the YISD Wide Area Network (continued)

- implementing in 2000-01 a T-1 load balancing solution that will optimize the performance of the three Internet connections

Campuses. Initially, the YISD connection from central office to the campuses was a T-1 line. With increasing demands for bandwidth, YISD has responded with upgrades that improve the data and telephone service:

- adding a second T-1 connection to campuses where demand was the greatest (typically high school campuses with heavy Internet usage)

As noted in the description of the telephone network. additional T-1s were provided specifically for phone service. Under the goals and objectives for the YISD network. the implementation of a leased fiber network is the solution for increased WAN bandwidth for the nest several years.

A Picture of the 2000-2001 YISD Network

YISD Data Network

With the upgrades that have taken place over the last several place to the initial YISD infrastructure initiatives. the picture of the YISD data network features these characteristics:

- Load balanced connection to three Internet providers (THEnet. Region 19. and a commercial ISP)
- Content filtering (district license for filter software. with campus ability to tailor filtering)

A Picture of the 2000-2001 YISD Network (continued)

YISD Data Network (continued)

- Multiple T-1 lines from the central office to the campuses, for all data connectivity (instructional and administrative systems) and voice connectivity
- C i routers installed at central office during the 2000-01 school year, with T-1 and fiber interface and capability to support VoIP
- Campus upgrade of routers (Cisco) during the 2000-01 school year (project completion in Spring/Summer) to prepare campus LANs to support fiber and VoIP solutions
- Campus LAN fiber backbones, 100Mbs switched environments
- Internal LAN connections to all administrative and instructional areas

YISD Telephone Network

The YISD telephone network was planned in conjunction with the data network and. as noted earlier, the ultimate goal is convergence of the two networks. Several telephone upgrades have prepared the district to achieve the goal a unified telecommunication network.

Initial Wiring. As pan of the wiring for the data, network, cabling was also run to ever).administrative location and every classroom for a telephone connection.

Standardized Telephone Switches. At the initiation of the network implementation in 1994-95, each campus had a non-standard telephone switch, which meant that the Telecom department had to stock pans for the different phone switches and employ technicians with experience with variety of equipment and systems at the campuses.

A Picture of the 2000-2001 YISD Network (continued)

YISD Telephone Network (continued)

In March 1995, the upgrade of all campuses to an Option 11 switch was begun. This was the first step in a multi-step process to equip the district with a standard, networked telephone solution.

All campuses would be equipped with Option 11 switches and compatible phone equipment by July 1997.

Networking the Campuses. With E-rate funding, the District in 1999 acquired a Nortel SL100 switch that networked the entire dimict. The features that the district was able to implement with the installation of the SL100 included

- Providing a telephone in every classroom
- 5-digit dialing for the entire district
- Voice mail for every district telephone user
- Automated attendant for every campus, with customized menus of service
- Homework hotlines and other automated information services for each campus
- Disaster recovery service and alternate paths for phone service in the event of interruption to primary service

Network Goals and Objectives: 2001-02 through 2003-04

Improvina YISD's Connection to the World

The plans for continued enhancement of YISD connection to the lntemet include:

Goal: To plan for increased bandwidth to the Internet in the immediate future via enhancements to the load-balanced environment.

Network Goals and Objectives: 2001-02 through 2003-04 (continued)

Improving YISD's Connection to the World

Goal: To plan for increasing bandwidth to the Internet via DSL or comparable bandwidth solutions.

Goal: To use E-rate discounts for district wide solutions for Internet access.

Improvinc WAN Connectivity

The plans for continued enhancement of the bandwidth of the YISD WAN include:

Goal: Implementation of the Time Warner leased fiber solution in the Fall semester of the 2001-02 school year. This solution will improve the central office-campus connection to 100Mbs (for every campus).

Goal: To plan for possible increase in WAN bandwidth. via increased capacity fiber connection or through other solutions such as wireless.

Improvino Campus LANS

The plans for continued enhancement of the campus local area networks include:

Goal: Completion of the campus router upgrade by the Fall semester of the 2001-02 school year.

Goal: Plan for the optimal timing for increases beyond 100 Mb processing for the campus backbones (gigabit speeds, etc.).

Goal: In conjunction with the campus router upgrade. to plan for the Voice over IP (VoIP) communication solutions planned for the 2001-02 and 2002-03 school years

Network Goals and Objectives: 2001-02 through 2003-04 (continued)

Improving Campus LANs (continued)

Goal: Ongoing wiring initiatives to ensure full LAN connections for every location defined by the campus as a network user.

Goal: To plan for expanded wireless solutions, including portable wireless labs, wireless connectivity for portables, and wireless connectivity for location outside the main building (e.g., stadiums, field houses, libraries. etc.).

Telephone Initiatives

The initiatives for the YISD telephone system are planned to converge the data and the phone networks:

Goal: Provide a VoIP solution in the 2001-02 and 2002-03 school years.

Goal: To provide for internal maintenance capacity for the SL100 with increased training for the YISD telecommunications staff.

Goal: To secure additional remote monitoring and diagnostic features on the phone system. allowing more centralized service of the phone system.

Gaol: To identify the additional features for the campuses to improve instructional services, administrative work requirements, and communication.